GULYAMOV, M.G.

State of psychiatric aid to the population of Tajikistan. Trudy Dush. med. inst. 61:7-14 '63.

Clinical aspect and psychopathology of protracted and chronic alcoholic hallucinations following a course with the syndrome of psychic automatism. Ibid.:45-49

Clinical aspect and psychopathology of influenzal psychoses proceeding with the syndrome of psychic automatism. Ibid.:60-78.

(MIRA 17:5)

RAGOZINA, T.A.; GULYAMOV, M.G.

Resistance of alumina-belite cements to corrosion by salts.
Uzb. khim. zhur. no. 2:79-86 '60. (MIRA 14:1)

1. Institut khimii AN UzSSR.
(Belite) (Alumina) (Cement)

GULYAMOV, M.U. (Tashkent)

Drug service in the first year of the seven-year plan. Apt. delo 9 no.3:8-10 My-Je '60. (MIRA 14:3)
(UZBEKISTAN--DRUGSTORES)

GULYAMOV, S.; KOVNATSKIY, S.; RASULOV, D.

Developments in passenger traffic. Avt. transp. 42 no.10:
12-14 O '64. (MIRA 17:11)

1. Nachal'nik upravleniya passazhirskikh perevozok Ministerstva avtotransporta i shosseynykh dorog Uzbekskoy SSR (for Gulyamov).
2. Zamestitel' nachal'nika upravleniya perevozok Ministerstva avtotransporta i shosseynykh dorog Moldavskoy SSR (for Kovnatskiy).
3. Direktor Ashkhabadskogo passazhirskogo avtoparka No.3004 (for Rasulov).

ZAYETS, T.L.; GULYAMOV, T.D.; LEKTORSKIY, B.I.

Decomposition of tissue proteins in burns. Biul. eksp. biol. i med. 55/i.e.56/ no.10:44-48 O'63 (MIRA 17:8)

1. Iz biokhimicheskoy laboratorii [illegible]v. - prof. A.S. Konikova) i fiziologicheskoy laboratorii (av/ prof. L.L. Shik) Instituta khirurgii imeni A.V. Vishnevskogo (dir. - deystvitel'nyy chlen AMN SSSR prof. A.A. Vishnevskiy) AMN SSSR. Predstavlena deystvitel'nym chlenom AMN SSSR A.A. Vishnevskim.

GULYAMOV, U.G. GULYAMOV, U.G.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1769
AUTHOR AZIMOV,S.A., GULJAMOV,U.G., ZAMČALOVA,E.A., NIZAMENDINOVA, M. PODGORECKIJ,M.I., JULDAŠEV,A.
TITLE The Investigation of σ-Stars Produced by Negative Pions.
PERIODICAL Žurn.eksp.i teor.fis,31,fasc.5,756-761 (1956)
Issued: 1 / 1957

These σ-stars were produced by negative pions which had come to a standstill in an emulsion chamber. This emulsion chamber consists of a large number of layers without carrier and permits the exact measuring of the energy of the secondary particles by determination of the range of ionization. The emulsion chamber used in this case consisted of 126 emulsion layers of 450μ thickness each. The chamber was exposed in the stratosphere for a period of 7 hours. When looking through it was observed that light negative mesons got stuck, and those stars were selected which contained at least one secondary charged particle. Furthermore, the true length of the traces of all secondary particles was measured and, if necessary, followed from layer to layer. When looking through, in particular those σ-stars were investigated from the center of which traces of slow electrons could be followed. Such electrons are essentially connected with the mesoatomic stage of the capture of a negative pion, and they are usually created on the occasion of the capture of a negative pion by the heavy nuclei of the photo-emulsion (Ag and Br). The traces of the very slow electrons take the form of thickenings, and the σ-stars corresponding to them were brought into connection with the spallation of Ag- and Br-nuclei.

Zurn.eksp.i teor.fis,31,fasc.5,756-761 (1956) CARD 2 / 2 PA - 1769

Three tables illustrate the distribution (over the number of rays) of the σ-stars, of σ-stars without slow electrons and "thickenings", of σ-stars with slow electrons and thickenings. On the occasion of the capture of negative pions by heavy nuclei, σ-stars are often produced which have few rays. Further tables contain data concerning the number of secondary particles with different energies which belong to the stars with different numbers of rays. The number of σ-stars with secondary particles of more than 30 MeV amounts to 20,1±1,3%. The percentage of stars with secondary particles with E $\gtrsim$ 30 MeV is nearly the same both in the case of heavy and light nuclei. Also the average values of energy which were computed for particles with E $\gtrsim$ 30 MeV are in all cases nearly equal. It is interesting to compare the energy spectra obtained here with the data for the K^- -mesons which were produced by σ-stars. On the average the stars originating from K^- - mesons have secondary particles with higher energy (and this more often) than the stars originating from negative pions. Among the stars originating from K^- - mesons (which contain no traces of pions) from 65,4 ±10,0% have secondary particles with more than E $\gtrsim$ 30 MeV. The average value of energy computed for such particles is 79,2 ± 8,5 MeV.

INSTITUTION: Physical Institute "P.N.LEBEDEV" of the Academy of Science in the Ussr.
Academy of Science of the Uzbekian SSR.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617320005-7"

AZIMOV, S.A.; GULYAMOV, U.G.; RAKHIMBAYEV, B.; USMANOVA, M.

Instances of hyperfragments with meson disintegration. Dokl. AN Uz. SSR no.9:13-18 '57. (MIRA 11:5)

1.Fiziko-tekhnicheskiy institut AN UzSSR. Predstavleno akademikom AN UzSSR U.A. Arifovym.
(Nuclear reactions) (Mesons--Decay)

Gulyamov U. G.

AUTHORS: Bannik, B. P., Gulyamov, U. G., Kopylova, D. K., 56-2-3/51
Nomofilov, A. A., Podgoretskiy, M. I., Rakhimbayev, B. G., Usmanova, M.

TITLE: Hyperfragments in Nuclear Emulsions (Giperfragmenty v yadernykh emul'siyakh)

PERIODICAL: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1958, Vol 34, Nr 2, pp 286-297 (USSR)

ABSTRACT: The present work investigates the properties and the relative frequency of the production of hyperfragments in two emulsion chambers, which are exposed to cosmic irradiation in the stratosphere. One of the chambers consisted of 600 μ thick emulsion layers of the Ilford type (Il'ford) G-5 and had been irradiated during the international expedition in the Po plains, the second chamber consisted of НИКФИ layers of the P type (thickness 400 μ) and was irradiated in the Soviet Union. In this investigation shortly discussed here 6π-mesons, 1π-meson, 1Λ^0-particle, 4 K^--mesons, 1Σ^--hyperon and 5 hyperfragments (of which 5 decayed with the emission of one pion) were found. Not one decay of a Σ^+-hyperon or of a K^+-meson was found, because the method used for

Card 1/3

investigating the emulsion layers excluded the determination of such particles. In all cases the traces of secondary pions were coplanar within 2-3°. The decay of a particle with the mass $(860 \pm 50)m_e$ is shown by means of a diagram; this is obviously the decay $\tau' \rightarrow \pi^+ + \pi^0 + \pi^0$ with the subsequent decay $\pi^0 \rightarrow \gamma + e^+ + e^-$. The mass of the K^--meson was determined from the multiple scattering as well as from the remaining range and amounted to $(1100 \pm 250)m_e$. One of the particles developing in the five-membered star causes a small secondary destruction. With all possible variants of nuclear capture the total energy output is considerably greater than $m_\pi c^2$. The same applies to two of the three other σ_K-stars, too. Obviously all σ_K-stars found here developed in capturing K^--mesons in the light nuclei of the emulsion. In the present work 10 hyperfragments were found which correspond to the criteria suggested by A. Filipkovskiy et al. (ref. 7). (Of these 10 hyperfragments five ended by mesonless decay, the remaining 5 by mesonic decay). For these processes decay the following decay schemes are proposed: ${}_\Lambda He_2^5 \rightarrow He_2^4 + p + \pi^-$, ${}_\Lambda He_2^5 \rightarrow He_2^3 + p + \pi^-$, ${}_\Lambda He_2^5 \rightarrow He_2^5 + p + \pi^-$, ${}_\Lambda H_1^4 \rightarrow He_2^4 + \pi^-$, ${}_\Lambda Li_3^7 \rightarrow He_2^4 + 2p +$

Hyperfragments in Nuclear Emulsions 56-2-3/51

+ n + π^-. There are 4 figures, 3 tables, and 17 references, 5 of which are Slavic.

ASSOCIATION: United Institute for Nuclear Research (Ob"yedinennyy institut yadernykh issledovaniy) **Tashkent Physico-technical Institute** (Tashkentskiy fiziko-tekhnicheskiy institut)

SUBMITTED: July 12, 1957

AVAILABLE: Library of Congress

1. Nuclear emulsions-Hyperfragments determination

Card 3/3

GULYAMOV, U.

CONCERNING ABNORMAL CASES OF HYPERFRAGMENT DECAY

S. A. Azimov, U. Gulyamov, M. Podogoretsky, B. Rakhimbayev

Results of the investigation of hyperfragments using thick photoemulsions are presented. From a total of 60,000 observed stars containing more than 7-8 black and grey spurs, 9 cases of hyperfragment decay were detected. In two of these cases abnormal decays with an ejection of a k-meson were observed.

If the K-meson is regarded as a decay product of a heavier hyperon than Ξ (distinct from the cascade hyperon, since it does not produce K-meson during decay), then it follows from the obtained decay schemes that the mass of these particles should be $\sim 3{,}000 m_e$.

Report presented at the International Cosmic Ray Conference, Moscow, 6-11 July 1959.

AZIMOV, S.A.; GULYAMOV, U.G.; RAKHIMBAYEV, B.G.

Two cases of the meson decay of hyperfragments. Dokl. AN Uz. SSR no.7:6-9 '59. (MIRA 12:10)

1.Fiziko-tekhnicheskiy institut AN UzSSR. Predstavleno akad. AN UzSSR S.V. Starodubtsevym.
(Mesons--Decay)

82407

S/056/60/038/03/05/033
B006/B014

24.6810

AUTHORS: Azimov, S. A., Gulyamov, U. G., Karimova, R., Rakhimbayev, B. G.

TITLE: Anomalous Decays of Hyperfragments //

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 38, No. 3, pp. 697-702

TEXT: In recent years particles have been detected in the decay of hyperfragments the masses of which corresponded to the K-meson mass within the limits of error. The authors subjected one emulsion chamber to cosmic radiation in the stratosphere, while another was bombarded with $4.5 \cdot 10^9$-ev pions; three such decay events were recorded, one of them already described in Ref. 4 and the others in the article under review. The two cases under consideration were found in the pion-bombarded chamber which contained emulsions of the type Ilford G-5. Altogether, 60,000 stars with $N_h \geq 8$ were recorded. Case 1: Fig. 1 shows a microphotograph. The primary star was of the type 18 + 2π, the particle F departing from it (path length of 101μ)

Card 1/3

Anomalous Decays of Hyperfragments

S/056/60/038/03/05/033
B006/B014

decayed into two particles the charges of which were (8 ± 2) e. The ranges of these particles (1 and 2) were (61 ± 0.4)μ and (9362 ± 122)μ, the angle between them was 83°50' ± 1°20'. Track 1 was attributed to an α-particle, and the mass of particle 2 was investigated by using two methods, i.e., the range-scattering method and the range-ionization method. The masses found by these methods were the following: (856 ± 167)m_e and (990 ± 120) m_e. Assuming that particle 2 be a K-meson it would have an energy of (38.3 ± 0.3) Mev and a momentum of (197.6 ± 1.4)Mev/c. The decay modes of the F-particle are considered to be the most likely ones: $C_6^{14} \rightarrow He_2^3 + K^- + n + B_5^{10}$ and $O_8^{18} \rightarrow He_2^3 + K^- + n + N_7^{14}$. Case 2: The primary star was of the type 19 + 3π; a particle F departed from it which, after having attained 28μ, decayed into the charged particles 1 and 2. The F-track has two breaks; the tracks 1 and 2 had a range of (465 ± 8)μ and (13640 ± 170)μ, the angle between them was 141° ± 1°30'. The mass of particle 2 was determined by 4 different methods, and the following masses were obtained: (801 ± 143)m_e by grain counting, (1170 ± 120)m_e from the density of breaks, (986 ± 132)m_e - by the method of constant deviations, and (764 ± 170)m_e - by

4

Anomalcus Decays of Hyperfragments

S/056/60/038/03/05/033
B006/B014

the method of the "constant cell". The following decay mode is considered probable: $H^4_1 \rightarrow He^3_2 + K^- + n + Q$. The individual methods are discussed. In order to find out whether the deviations of the measured mass values of the proton mass (in measurements by the range-scattering and the range-ionization methods) are interrelated, the mass distributions were studied. Fig. 3 shows the particle mass distribution measured by the $[\langle\alpha\rangle, R]$ method for particles whose masses are larger than the proton mass, as determined by the $[\varepsilon, R]$ method; Fig. 4 represents the distribution for particles whose masses are smaller than the proton mass. Agreement is adequate to permit the assumption that there is no correlation between the deviations of multiple scattering and ionization. The probability that the proton mass and the K-meson mass coincide by chance is lower than 0.5% with an error of 400 m_e. Data obtained by the above authors is compared in a table with that published in Refs. 1-5. Finally, the authors thank M. I. Podgoretskiy for his interest and advice. There are 4 figures, 1 table, and 11 references, 4 of which are Soviet.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk Uzbekskoy SSR (Institute of Physics and Technology of the Academy of Sciences, Uzbekskaya SSR)

SUBMITTED: August 24, 1959

Card 3/3

GULYAMOV, U. G.

Cand Phys-Math Sci - (diss) "Study of hyperfragments by the method of nuclear emulsions." Tashkent, 1961. 10 pp; (Academy of Sciences Uzbek SSR, Physics-Technology Inst); 225 copies; price not given; (KL, 6-61 sup, 192)

33093
S/638/61/001/000/016/056
B101/B102

24.6700

AUTHORS: Azimov, S. A., Gulyamov, U. G., Karimova, R., Rakhimbayev, B. G.

TITLE: Study of excited fragments

SOURCE: Tashkentskaya konferentsiya po mirnomy ispol'zovaniyu atomnoy energii. Tashkent, 1959. Trudy. v. 1. Tashkent, 1961, 126-128

TEXT: The study of an Ilford G-5 emulsion pile irradiated with $4.5 \cdot 10^9$ ev pions revealed two cases of decay of an excited fragment among 60,000 stars with $N_h \geqslant 8$. The particle mass was in one case comparable to the K-meson. The particles were stopped in the emulsion without secondary reactions. Case 1: The particle F leaving the primary $(18 + 2_\pi)$-type star decays after 101μ with emission of two equally charged particles (1 and 2) which are stopped in the emulsion after $(61 \pm 0.4)\mu$ and $(9362 \pm 122)\mu$. If it is assumed that track 1 is to be attributed to an

Card 1/3

X

33093
S/638/61/001/000/016/056
B101/B102

Study of excited fragments

α-particle, 11.1±0.1 Mev is found for the energy, and 250±1 Mev/sec for the momentum. The mass of particle 2 was determined by scattering and ionization. The following relations were found: $M(I,R) = (856\pm167)m_e$, $M(\langle\alpha\rangle,R) = (990\pm120)m_e$. The energy of particle 2 taken as the K-meson is found to be (38.3±0.3)Mev, and (197.6±0.8)Mev/sec is found for its momentum. No recoil track of the nuclear residue was observed. Hence, the most probable reactions are as follows: $*C_6^{14} \rightarrow He_2^3 + K^- + n + B_5^{10}$; or $*O_8^{18} \rightarrow He_2^3 + K^- + n + N_7^{14}$. Case 2 A particle F, leaving the primary star $9 + 3\pi$, decays after 28μ into two equally charged (e=2) particles. The track width of F is that of singly-charged particles (proton or pion). Particle 1 is stopped in the emulsion after 465±8μ, and particle 2 after 3640±170μ. The following relations were obtained by different methods from the mass of particle 2: $M(I,\langle\alpha\rangle) = (801\pm143)m_e$; $M(I,R) = (1170\pm120)m_e$; $M(\langle\alpha\rangle,R) = (986\pm132)m_e$; $M(\langle\alpha\rangle,R) = (764\pm170)m_e$. The comparison between

Card 2/3

Study of excited fragments

the charges of F and particle 1 yielded the mass numbers $A_F = 3$ or 4, $A_1 = 3$ or 4. The significant residual momentum of the particles 1 and 2 is bound to be compensated by an uncharged particle. As a result, $A_F = 4$, and $A_1 = 3$. Then, the sum of momenta of 1 and 2 is (294.5±4.5)Mev/sec, and decay takes place according to the reaction: $*H_1^4 \rightarrow He_2^3 + K^- + n + Q$. The total energy liberation, if the neutral particle is assumed to be a neutron, is (110.4±1.6)Mev (regardless of the proper mass of the K-meson). There are 1 figure and 4 references: 1 Soviet and 3 non-Soviet. The two references to English-language publications read as follows: Freier P., Lofgren E. J., Oppenheimer E. P., Ney E. P., Phys. Rev., 74, 1818, 1948; Ritson D. M., Phys. Rev., 91, 1572, 1953.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UzSSR
(Physicotechnical Institute of the AS Uzbekskaya SSR)

Card 3/3

AZIMOV, S.A.; GULYAMOV, U.G.; RAKHIMBAYEV, B.G.

Bonding energy of Λ^0-particles in hyperfragments. Izv. AN Uz. SSR. Ser. fiz.-mat. nauk no.4:70-77 '61. (MIRA 14:9)

1. Fiziko-tekhnicheskiy institut AN UzSSR. Chlen-korrespondent AN UzSSR (for Azimov).

(Hyperfragments)

A[illegible]v, S.A.; G[illegible]KHOV, G.G.

Indexed for Λ^0 [illegible]ents. Izv. AN Uz. SSR. Ser. fiz.-mat.nauk no.5:65-89 '61. (MIRA 14:10)

1. Fiz[illegible]-tekhnicheskiy institut AN Uz. SSR. 2. Chlen-korrespondent AN Uz.SSR (for Azimov).
(Hyperfragments)
(Particles(Nuclear physics))

BETER, Ye.V.; GULYAMOV, U.G.

Role of $\pi\pi$ -interaction in the formation of Feretti "triplets". Izv. AN Uz. SSR. Ser. fiz.-mat. nauk 8 no.1:90-92 '64. (MIRA 17:6)

1. Institut yadernoy fiziki AN UzSSR.

AZIMOV, S.A.; EFETOV, Ye.V.; GULYAMOV, U.G.

Upper bound of the cross section of coherent interactions between fast π^--mesons and heavy nuclei from emulsions. [Ad. fiz. 1 no.1:72-75 Ja '65. (MIRA 18:7)

AZIMOV, S.A.; BANNIK, B.P.; VISHKI, T.; GULYAMOV, U.G.; DO IN SEB; RAKHIMBAYEV, B.G.; CHERNOVA, L.I.

Inelastic pp-interactions with low transfer of momentum. IAd. fiz. 1 no.4:676-680 Ap '65. (MIRA 18:5)

1. Ob'yedinennyy institut yadernykh issledovaniy. 2. Sotrudniki Instituta yadernoy fiziki AN Uzbekskoy SSR (for Azimov, Gulyamov, Rakhimbayev, Chernova).

AZIMOV, S.A.; ARIPOV, R.; GULYAMOV, U.G.; RIZAYEV, Kh.A.

Production of slow π^+-mesons in the interaction between 9-Bev. protons and photoemulsion nuclei. Izv. AN Uz. SSR. Ser. fiz.-mat. nauk 9 no.4:59-62 '65. (MIRA 18:9)

1. Institut yadernoy fiziki AN UzSSR.

L 21802-66 EWT(m)/T

ACC NR: AP6012191 SOURCE CODE: UR/0386/66/003/008/0336/0340

AUTHOR: Azimov, M. A.; Basova, Ye. N.; Gulyamov, U. G.; Igamberdiyev, K. R.; Kolesnik, V. G.; Pantuyev, V. S.; Sil'vestrov, L. V.; Khachaturyan, M. N.

ORG: Joint Institute of Nuclear Research (Ob"yedinennyy institut yadernykh issledovaniy); Institute of Nuclear Physics, AN UzSSR, Tashkent (Institut yadernoy fiziki AN UzSSR)

TITLE: Differential cross section of charge exchange of 4.8-Gev/c π^- mesons with protons

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 3, no. 8, 1966, 336-340

TOPIC TAGS: pion, charge exchange, differential cross section, spark chamber, Gamma radiation, meson, proton

ABSTRACT: The authors present preliminary results of the measurement of the differential cross section of the reaction $\pi^- + p \rightarrow n + \pi^0$ by a method described earlier (Preprint OIYaI, R-2436, Dubna, 1965), of detecting high-energy π^0 mesons with the aid of a spark chamber and a total-absorption Cerenkov counter. Unlike other methods, this method makes it possible to measure with good accuracy both the angle and the energy characteristics of γ quanta from π^0 meson decays. The

Card 1/2

L 21802-66
ACC NR: AP6012191

setup was irradiated in a beam of 4.8-Gev/c π^- mesons from the OIYaI proton synchrotron. The measurements were made by a difference method using polyethylene and carbon targets. From the energy and angular distributions of the cases when two γ quanta were registered in the chamber the authors calculated the differential and total cross section of the reaction, with corrections evaluated for the following effects: (a) probability of conversion of two γ quanta in the lead converter, (b) probability of conversion of at least one of the γ quanta in the target or in the scintillation-counter material, (c) muon contamination of the beam, and (d) attenuation of the beam in the target. The averaged forward charge-exchange cross section was found to be 0.49 ± 0.1 mb/(Gev/c)^2, or 0.33 ± 0.07 mb/sr in units of solid angle (c.m.s.) (compared with 0.28 mb/sr from calculation based on the dispersion relations and the known data on the total cross sections of the π^+p and π^-p interactions. The total cross section of the reaction, calculated with account of the experimental geometry and published data on the differential charge-exchange cross section at large 4-momentum transfer is equal to 0.11 ± 0.02 mb.
The authors thank V. G. Grishin and M. I. Podgoretskiy for useful discussions, S. V. Mukhin, S. V. Rikhvitskiy, and I. N. Semenyushkin for the opportunity to use the pion channel, and I. V. Chuvilo, M. D. Shafranov, and I. M. Gramenitskiy for collaboration. Orig. art. has: 2 figures and 2 formulas.

SUB CODE: 20/ SUBM DATE: 8Mar66/ ORIG REF: 002/ OTH REF: 004

Card 2/2 PB

L 23759-66 EWT(m)/T

ACC NR: AP6014808 SOURCE CODE: UR/0367/65/001/001/0072/0075

AUTHOR: Azimov, S. A.; Beter, Ye. V.--Beter, E. V.; Gulyamov, U. G.

ORG: none

TITLE: Upper limit of cross section for coherent interactions of fast pi-mesons with heavy nuclei of an emulsion

SOURCE: Yadernaya fizika, v. 1, no. 1, 1965, 72-75

TOPIC TAGS: pi meson, nuclear emulsion, pion, particle interaction, particle cross section

ABSTRACT: A method is proposed for selecting instances of coherent production of two pions on a nucleus by a high-energy pion. The method is based on information obtained from angular measurements only. The upper limit of the cross section is evaluated for the process on heavy nuclei of a photoemulsion with the momentum of the primary pions as 17.2 BEV/c. Orig. art. has: 1 figure and 10 formulas. [Based on authors' Eng. abst.] [JPRS]

SUB CODE: 20 / SUBM DATE: 25Jun64 / OTH REF: 008

Card 1/1 UDC

ACC NR: AP6018115 SOURCE CODE: UR/0141/65/000/004/0059/0062

AUTHOR: Azimov, S. A.; Aripov, R.; Gulyamov, U. G.; Rizayev, H. A.

ORG: Nuclear Physics Institute, AN UzSSR (Institut yadernoy fiziki AN UzSSR)

TITLE: Formation of slow pi sup + mesons on interaction between protons of 9-bev energy with photoemulsion nuclei 17

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 4, 1965, 59-62

TOPIC TAGS: pi meson, proton interaction, angular distribution, nuclear emulsion, particle accelerator

ABSTRACT: Previous analyses of the angular and energy distributions of the slow protons emitted as a result of the interaction between 24-beV protons and heavy emulsion nuclei has led to important conclusions concerning the behavior of nuclei in the presence of very high excitation nuclei. An investigation has been made of low-energy and so-called "sub-barrier" pions which will ultimately provide information on the production of new resonance particles. However, the available statistical material is much too limited to allow any conclusions concerning the mechanism of production of such mesons. Hence, the authors investigated certain aspects of the process of the formation of slow mesons, including sub-

Card 1/2

L 39267-64
ACC NR: AP6018115

barrier mesons, by exposing an emulsion plate to a beam of protons with 9-beV energy in a synchrophasotron and tracking the paths of the identified π+ -mesons. It is shown that the formation of slow π^+-mesons cannot be explained by the standard mechanism of the evaporation of a strongly excited nucleus, a mechanism normally used to account for the emission of slow protons. This study has resulted in the detection of 282 primary stars containing π^+-mesons with energies of up to 30 meV. The search for and analysis of slow π^--mesons are continuing. Orig. art. has: 3 figures. [JPRS]

SUB CODE: 20 / SUBM DATE: 09Apr64 / ORIG REF: 001 / OTH REF: 006

Card 2/2

L 23737-66 EWT(m)/T

ACC NR: AP6014820 SOURCE CODE: UR/0367/65/001/004/0676/0680

AUTHOR: Azimov, S. A.; Bannik, B. P.; Vishki, T.; Seb, Do In; Gulyamov, U. G.; Rakhimbayev, B. G.; Chernova, L. I.

ORG: [Azimov, Gulyamov, Rakhimbayev, Chernova] Institute of Nuclear Physics, AN UzbSSR (Institut yadernoy fiziki AN UzbSSR); Joint Institute of Nuclear Research (Ob"yedinennyy institut yadernykh issledovaniy)

TITLE: Inelastic pp-interactions with low momentum transfer

SOURCE: Yadernaya fizika, v. 1, no. 4, 1965, 676-680

TOPIC TAGS: inelastic interaction, nuclear emulsion, proton, isobar

ABSTRACT: The nuclear emulsion method is used to study inelastic pp--interactions for energies of 2.26 and 9 GEV of a primary proton. The search for events in the emulsion was performed by accelerated inspection of traces. Energy distributions were obtained for slow protons. The events selected are of two types: pp-interactions and a small number of interactions connected with secondary processes in the nucleus. For the energy distribution all cases were taken with their weights K = 1/W, where W is the probability of registration. Both distributions were normalized for the complete observed path of primary protons R = 3694m. In the processing of the experimental data the relative output of the reaction was evaluated qualitatively with the formation of one or two isobars. The authors thank Van Shu-fen', T. Vishki, I. M. Gramenitskiy, V. G. Grishin, N. Dalkhazbav, R. M., Lebedev, A. A. Nomofilov, M. I. Podgoretskiy,

Card 1/2

9

V. N. Strel'tsov for providing us the materials, which were so useful in this work. The authors also thank I. M. Gramenitskiy for his interest and assistance in the work; M. I. Podgoretskiy for the discussions; and E. G. Bubelev, A. Yuldashev, V. N. Strel'tsov, Yu. A. Troyan and V. G. Grishin for participating in the discussions and for their remarks. The authors offer further thanks to the laboratory workers of IYaF, AN UzbSSR and LVE OIYaI for carrying-out the review of photoemulsions and measurements; and A. T. Balandikov for help in carrying-out the calculations. Orig. art. has: 4 figures. [JPRS]

SUB CODE: 20 / SUBM DATE: 01Jul64 / ORIG REF: 006 / OTH REF: 001

ACC NR: AP6018052 SOURCE CODE: UR/0367/65/002/006/1049/1053

AUTHOR: Azimov, S. A.; Bator, Ye. V.; Gulyamov, U. G.; Yeroshkina, N. B.; Levin, A. Ya.

ORG: Institute of Nuclear Physics, AN UzSSR (Institut yadernoy fiziki AN UzSSR)

TITLE: Coherent inelastic interactions between high-energy pi sup minus mesons and heavy nuclei in photoemulsions [This paper was given at the 14th Annual Conference on Nuclear Spectroscopy, Tbilisi, February 1964]

SOURCE: Yadernaya fizika, v. 2, no. 6, 1965, 1049-1053

TOPIC TAGS: pi meson, heavy nucleus, inelastic interaction, pion, nuclear emulsion

ABSTRACT: The characteristics of interactions assumed to be the coherent inelastic reactions $\pi^- + A \rightarrow \pi^+ + \pi^- + \pi^- + A'$ on heavy nuclei in a photoemulsion are investigated for 17.2 Gev/c primary pion momenta. The cross-section of this process is found to be 5.4 ± 1.4 mbn. Compared with the corresponding value for carbon, this indicates a dependence of the cross-section on the atomic number of the type $A^{2/3}$ or $A^{1/3}$. Orig. art. has: 5 figures and 8 formulas. [Based on authors' Eng. abst.] [JPRS]

SUB CODE: 20 / SUBM DATE: 17Apr65 / ORIG REF: 003 / OTH REF: 012

Card 1/1

L 00010-67 EWT(m)
ACC NR: AP7002337 SOURCE CODE: UR/0166/66/000/003/0054/0057

AUTHOR: Azimov, S. A.; Gulyamov, U. G.; Rakhimbayev, B. G.; Chernova, L. I. 24 23 B

ORG: Institute of Nuclear Physics, Academy of Sciences Uzbek SSR (Institut yadernoy fiziki AN UzSSR)

TITLE: Inelastic p-p interactions at an energy of 2.26 gev

SOURCE: AN UZSSR. Izvestiya, Seriya fiziko-matematicheskikh nauk, no. 3, 1966, 54-57

TOPIC TAGS: inelastic interaction, meson interaction, nucleon interaction

ABSTRACT: There has recently been developed a model for the single-meson interaction of particles at high energies. It is of great interest to verify the single-meson collison scheme and to compare model predictions with experimental data. This necessitates careful investigations into the dependence of the inelastic nucleon-nucleon interaction σ^{inel}_{NN} on the square of the four-dimensional recoil momentum Δ^2 for several fixed values of the kinetic energy of the primary proton, as well as ascertaining the course of the energy dependence of σ^{inel}_{NN} with a "cut-off" for the quantity Δ^2.

The present article sets forth the results of a study of these questions for a primary proton energy of 2.26 Gev. Used for the investigations was an

Card 1/2

0925 0625

L 09088-67

ACC NR: AP7002337

emulsion cloud chamber irradiated by 2.26 Gev protons on a synchrophasotron of OIYaI [Ob"yedinennyy institut yadernykh issledovaniy; Joint Institute for Nuclear Research). The chamber consisted of 236 "R" type emulsion sheets of NIKFI [Nauchno-issledovatel'skiy kinofoto institut; Motion Picture and Photography Scientific Research Institute]. Certain visual and kinematic criteria were used for selecting events for analysis and, as a result, most of the interactions selected were p-p collisions. Orig. art. has: 2 figures and 2 formulas. [JPRS: 38,168]

SUB CODE: 20 / SUBM DATE: 22Feb65 / ORIG REF: 007 / OTH REF: 008

Card 2/2

GULYAMOV, Yakh'ya Gulyamovich, prof.; TOLSTOV, S.P., otvetstvennyy red.; LEVINA, A.A., red.izd-va; SHEPEL'KOV, A.T., tekhn.red.

[History of irrigation in Khorezm from ancient times to our day] Istoriia orosheniia Khorezma s drevneishikh vremen do nashikh dnei. Tashkent, Izd-vo Akad.nauk Uzbekskoi SSR, 1957. 313 p.

1. Pochetnyy akademik AN UzSSR, chlen-korrespondent AN SSSR (for Tolstov)

(Khorezm Province--Irrigation)

AL-BIRUNI; ABDULLAYEV, Kh.M., akademik, red.; AZIMDZHANOVA, S.A., kand. istor.nauk, red.; BELENITSKIY, A.M., kand.istorich.nauk, red.; BELYAYEV, V.I., kand.filologicheskikh nauk, red.; GULYAMOV, Ya.G., red.; KARY-NIYAZOV, T.N., akademik, red.; LEMMLEYN, G.G., prof., red.; SAL'YE, M.A., kand.filolog.nauk, red.; SEMENOV, A.A., red.; TOLSTOV, S.P., pochetnyy akademik, red.; UKLONSKIY, A.S., akademik, red.; LYUBCHANSKAYA, N.I., red.; GOR'KOVAYA, Z.P., tekhn.red.

[Selected works] Izbrannye proizvedeniia. Tashkent, Izd-vo Akad.nauk Uzbekskoi SSR. Vol.1. 1957. 485 p. (MIRA 11:1)

1. AN UzSSR (for Abdullayev, Kary-Niyazov, Tolstov, Uklonskiy).
2. Chlen-korrespondent AN UzSSR (for Gulyamov, Semenov).
(Science, Medieval)

Ya-G

AUTHOR: Aleyev, B. G., Candidate of Agricultural Sciences 30-58 6-13/45

TITLE: Plenary Meeting of the AS, Uzbek SSR (Obshcheye sobraniye Akademii nauk Uzbekskoy SSR)

PERIODICAL: Vestnik Akademii nauk SSSR, 1958, Nr 6, pp. 80 - 81 (USSR)

ABSTRACT: Kh.F.Fazylov, Secretary, Member, Academy of Sciences, USSR, gave the account by describing the general development of the activity of the AS. He stressed especially the economical importance of the works which were carried out in 1957 in connection with the recovery of the Golodnaya-step region. The Physical-Technical Institute worked out a gammadevice with a source intensity of 1000 Curie, as well as a watershield for carrying out various investigations on radiation. Important work in connection with the International Geophysical Year, amongst which was a glaciological expedition to the Fedchenko-glacier, was also carried out. He also reported on numerous new editions of books. The second volume of the "History of the Uzbek SSR" was published on the occasion of the 40-th anniversary of the October Revolution as a result of several year's work of a great collec-

Card 1/2

tive of scientific collaborators. In 1957, the following monographic works by Members of the Academy were published: M.N. Nabiyev "Acidiferous Nitrogen-Processing of Phosphates" and Ya.G. Gulyamov "The History of the Irrigation of the Khorezm". 6 new scientific institutions and approximately 2o divisions and laboratories were organized in the AS in 1957. The number of scientific and scientific and technical collaborators increased to almost 8oo persons. The Academy took an active part in many international congresses, as well as in the exchange of books and periodicals. The following shortcomings were indicated: An insufficient development in a series of fields, as well as in the instruction, training and utilization of the scientific cadres. The necessity of an intensification of the connection between science and practice was stressed. The assembly approved a plan for studies of problems and objectives for 1958 which had been submitted by the Presidium of the Academy.

1. Scientific research--USSR 2. Scientific research--Economic aspects

Card 2/2

KALANDAROV, N.; ABDURAKHIMOV, M.; SAMANDAROV, S.; SEREDA, T.; GULYAMOV, Ya.G., doktor ist. nauk, prof., spets. red.; NOTKIN, I.I., spets. red.; KOCHEROV, V., red.; ARKAD'YEVA, A., red.; BAKHTIYAROV, A., tekhn. red.

[Khorezm; brief manual and guidebook]Khorezm; kratkii spravochnik-putevoditel'. Tashkent, Gos.izd-vo Uzbekskoi SSR, 1962. 113 p. (MIRA 16:3)
(Khorezm Province--Guidebooks)

GULYAMOVA, E.

Ten centuries ago. Zdrav. Tadzh. 7 no.4:19-20 Jl-Ag '60. (MIRA 13:9)

1. Nachal'nitsa Kulyabskogo otryada Tadzhikskoy arkheologicheskoy ekspeditsii.

(KHUL'BUK--WATER SUPPLY)

USENKO, V.A.; GULYAMOVA, F.M.

Effect of some parameters of the production technology of triacetate yarn on its physical and mechanical properties. Izv.vys.ucheb.zav.; tekh.tekst.prom. no.5:55-62 '62. (MIRA 15:11)

1. Moskovskiy tekstil'nyy institut.
(Rayon--Testing)

USSR/[illegible]

Physio-mechanical properties of triacetate fibers. Khim. volok. no.1:74-76 '62. (MIRA 15:4)

1. Moskovskiy tekstil'nyy institut.

BULGA[illegible]

UZUNOV, G., Academician, head of the Department of Psychiatry, Higher Medical Institute (VMI), Sofia; [illegible]NOV, S., Professor, head of the Department of Neurology, VMI, Sofia; and GULOBOVA, M.

"On the Clinical Picture of Childhood Acute Alcohol Encephalopathy with a Prolonged Course."

Sofia, Nevrologiya, Psikhiatriya i Nevrokhirurgiya, Vol 5, No 2, 1966, pp 83-94

Abstract [authors' Russian and English summaries, modified]: On the basi[illegible] 8 cases observed in Bulgaria (one case described in detail), three successive stages of the clinical picture of childhood acute alcohol encephalopathy are discussed: the acute stage of prolonged alcohol coma; the transitory stage following recovery from coma; and the end stage of epilepsy and mental deterioration. The coma develops dramatically with initial convulsions (decerebrate state) and autonomic phenomena, or with initial epileptic seizures. In [illegible] the decerebration rigidity was permanent and grave. Two of these cases [illegible] in death and showed bilateral symmetrical necrosis of the putamen. In [illegible] cases the decerebration phenomena occurred as attacks. Only in one case (the youngest patient (1 year and 7 months old) the decerebration rigidity was not manifest and replaced by an athetous- and torsiodystonic syndrome combined with pyramidal symptoms. In this stage hyperthermia, tachycardia, arterial hypertension, hyperglycemia and leucocytosis were observed as signs of disturbed central regulation. Following recovery from coma a number of transitory

BULGARIA

Sofia, Nevrologiya, Psikhiatriya i Nevrokhirurgiya, Vol 5, No 2, 1966, pp 83-94

neurological and psychotic phenomena appeared: ataxia, hyperkyneses (myoclonia, "bows," ballism), mild spastic and flaccid pareses, visual agnosia, delirious states and certain decomposition of speech. In the final state, severe and permanent disturbances of the bioelectrical activity were observed, involving the reticular formation and clinically manifest as epilepsy, almost inaccessible to treatment. Often a more or less manifest deterioration of the child's personality was found, with symptoms of euphoria and puerilism, intellectual retardation and, in some cases, irreversible dementia. Eight Bulgarian refer[illegible]
Manuscript received in Jan 66.

2/2

NAZAROV, Z.F.; GULYAMOVA, M.; ARSLANOVA, S.S.; RAKHMATULLAYEV, M.

Content of vitamin C and carotene in vegetable food products of Bukhara Province. Uzb. biol. zhur. 7 no.5:25-28 '63. (MIRA 18:11)

1. Institut krayevoy eksperimental'noy meditsiny AN UzSSR.

Gulyamova, M. A.

The elimination of arsenic from the organism and its concentration in the blood in syphilis therapy by procedures employed in 1949-51. M. A. Gulyamova. *Za Sotsialist. Zdravookhranenie Uzbekistana* 1954, No. 2, 75-7; *Referat. Zhur. Khim., Biol. Khim* 1955, No. 5715.—Studies were made on 20 patients treated with novarsenol (I), 14 with miarsenol (II), and 26 with oarsenol (III). At the conclusion of the course of treatment with I high As elimination persisted for 12-15 days; 49.8-60.7% of it was eliminated *via* the urine and feces. In treatment with II As elimination persisted for 7-10 days, and totaled 61.2-78.2% of the administered As. It is concluded that the low therapeutic effect of III was due to its rapid elimination and consequent low concn. in the blood. Max. concn. of As in the blood for I was 0.037-0.370 mg. %, for II 0.037-0.110, and for III 0.0010-0.066.

B. S. Levine

GULYAMOVA, M. A.

GULYAMOVA, M. A. -- "The Excretion of Arsenic in the Treatment of Syphilis Patients According to the Systems Used in 1948-1949 and 1951-1953. Tashkent, 1955. (Dissertation for the Degree of Candidate in Medical Sciences).

So.: Knizhnaya Litopis', No. 7, 1956.

GULYAMOVA, M.A., kand.med.nauk

Antitoxic function of the liver in vitiligo patients treated with psoralen and meladinin. Med.zhur.Uzb. no.8:36-39 Ag '62. (MIRA 16:4)

1. Iz kafedry kozhnykh i venericheskikh bolezney (zav. - prof. A.A.Akovbyan) Tashkentskogo gosudarstvennogo meditsinskogo instituta.
(SKIN--DISEASES) (PSORALEN) (LIVER) (MELADININ)

YANBAYEVA, Kh.I., kand.med.nauk; GULYAMOVA, S.G., aspirant

Use of phonocardiography in the diagnosis of mitral and aortal heart failure. Med. zhur. Uzb. no.8:92-97 Ag '61. (MIRA 15:1)

1. Iz Instituta krayevoy i eksperimental'noy meditsiny AN UzSSR (direktor - G.M.Makhkamov).
(HEART--VALVES--DISEASES) (HEART--SOUNDS)

MAKASHEV, A.P., prof.; POLETAYEVA, N.N., starshiy nauchnyy sotrudnik; ISAGULYAN, E.A., mladshiy nauchnyy sotrudnik

Experimental storage of apples in film wrapping material and containers. Khol.tekh. 41 no.1:36-41 Ja-F '64. (MIRA 17:3)

1. Krasnodarskiy nauchno-issledovatel'skiy institut pishchevoy promyshlennosti.

BUNYATYAN, G.Kh., akademik; KAZARYAN, B.A.; KARAGEZYAN, K.G.; GULYAN, E.A.

Penetration of γ-aminobutyric acid through hematoencephalic barrier. Dokl. AN Arm. SSR 40 no.5:289-293 '65.
(MIRA 18:7)

1. Institut biokhimii AN ArmSSR. 2. AN ArmSSR (for Bunyatyan).
Submitted March 1, 1965.

KAZARYAN, A.A.; [illegible], I.A.

Role of the hypophysis in the hyperglycemic effect of gamma aminobutyric acid. Vop. biokhim. mozg. 1:73-77 '64.
(MIRA 18:9)

1. Institut biokhimii AN ArmSSR.

GRIGORYAN, G.O.; GULYAN, E.Kh.

Age relation between chalcopyrites and gray copper ores in Armenian complex metal deposits. Trudy Arm.geol.upr. no.1:109-113 '57. (MIRA 12:1)
(Armenia--Chalcopyrite) (Armenia--Tetrahedrite)

NALIVKIN, D.V., akademik, glav. red.; BELYAYEVSKIY, N.A., zam. glav. red.; TIKHOMIROV, V.V., zam. glav. red.; ASSOVSKIY, A.N., red.; MEL'NIKOV, O.D.,red.; SHATSKIY, N.S., akademik, red.[deceased]; YANSHIN, A.L., akad., red.; AKOPYAN, A.O., red.; ASLANYAN, A.T., red.; GOGINYAN, V.Ye., red.; GULYAN, E.Kh., red.; KAZARYAN, S.V., red.; MALKHASYAN, E.G., red.; KHACHATURYAN, E.A., red.; GOVORKYAN, L.M., red.vypuska; VARTANESOVA, A.A., red. izd-va; SAROYAN, P.A., tekhn. red.

[Study of the geology of the U.S.S.R.] Geologicheskaia izuchennost' SSSR. Erevan, Izd-vo Akad. nauk Armianskoi SSR.Vol.48.[Armenian S.S.R.; period of 1951-1955] Armianskaia SSR; period 1951-1955. No.1.[Published studies] Opublikovannye raboty. 1961. 127 p. (MIRA 14:9)

(Armenia--Geology)

GULYAN, E.Kh.

Andalusite-bearing rocks of the northern slope of the Bargushat Ridge. Razved. i okh. nedr 27 no.8:3-6 Ag '61. (MIRA 16:7)

1. Upravleniye geologii i okhrany nedr pri Sovete Ministrov Armyanskoy SSR.
(Armenia--Andalusite)

GULYAN, E.Kh.

Composition of iron ores from the Armenian S.S.R. Razved. i okh. nedr 29 no.7:12-16 Jl '63. (MIRA 16:9)

1. Upravleniye geologii i okhrany nedr pri Sovete Ministrov Armyanskoy SSR.

(Armenia—Iron ores—Analysis)

GUL'YAN, E.Kh.

Accessory apatite from an iron ore deposit. Izv. AN Arm. SSR. Nauki o zem. 7 no.1:3-9 '64. (MIRA 17:6)

1. Upravleniye geologii i okhrany nedr pri Sovete Ministrov Armyanskoy SSR.

AVAKELYAN, R.A.; VEGUNI, A.T.; BAL'YAN, S.P.; SAYADYAN, Yu.V.; ASRATYAN, V.P.; BAGDASARYAN, G.P.; MALKHASYAN, E.G.; ARUTYUNYAN, A.R.; ARUTCHYAN, A.G., red.; ASLANYAN, A.T., red.; GOGINYAN, V.Y., red.; GULYAN, E.Kh., red.; KAZARYAN, S.V., red.; MKRTCHYAN, K.A., red.; TSAMERYAN, P.P., red.

[Study of the geology of the U.S.S.R.] Geologicheskaia izuchennost' SSSR. Erevan, Izd-vo AN Arm. SSR. Vol.48. No.1. 1964. 157 p. (MIRA 18:6)

GUL'YAN, N. G.

BAGAYEVA, M.I., kandidat meditsinskikh nauk; GUL'YAN, N.G. (Moskva)

Aureomycin therapy of suppurative skin diseases. Sov. med. 18 no.7:36-37 Jl '54. (MLRA 7:8)

(PYODERMA, therapy
*chlortetracycline)
(CHLORTETRACYCLINE, therapeutic use
*pyoderma)

GULYAN, E.Kh.

Some mineralogical and geochemical characteristics and the conditions governing the endogenetic mineralization of the northern slope of the Bargushat Range. Izv. AN Arm. SSR. Nauki o zem. 18 no.5:54-64 '65. (MIRA 18:9)

1. Gosudarstvennyy proizvodstvennyy geologicheskiy komitet Armyanskoy SSR.

GUL'YAN

AGZIBEGOVA, V.N.; GUL'YAN, N.G.

Aureonycin salve in treating seborrheal diseases. Vest.derm. i ven. el no.3:48 My-Je '57. (MIRA 10:11)

1. Iz Vtoroy poliklinik upravleniya pri Ministerstve zdravookhraneniya SSSR.
(SEBACEOUS GLANDS--DISEASES) (AUREOMYCIN)

TURCHINS, Ya.B. [Turcins, J.], red.; GULYAN, P.V., kand.ekon.nauk, red.; STRAZDINA, P.F., kand.ekon.nauk; red.; SAVEL'YEVA, Ye., red.; LEMBERGA, A., tekhn.red.

[Problems in improving the living standards of workers] Voprosy povysheniia urovnia zhizni trudiashchikhsia; materialy. Riga, Izd-vo Akad.nauk Latviiskoi SSR, 1961. 218 p.

(MIRA 15:2)

1. Konferentsiya, posvyashchennaya voprosam povysheniya urovnya zhizni trudyashchikhsya Latviyskoy SSR, Riga, 1960. 2. Chlen-korrespondent AN Latviyskoy SSR (for Turchins). 3. Institut ekonomiki AN Latviyskoy SSR (for Gulyan, Strazdina).
(Latvia--Cost and standard of living--Congresses)

KATSITADZE, Sh.S.; GULYAN, S.P.

Casting into ceramic molds of shape-forming parts for die casting. Lit. proizv. no.6:37 Je '64. (MIRA 18:5)

GOLYANITSKAYA, L. F.

Dissertation: "Types of Impurities Formed During the Refining of Lead with Oxygen." Cand Tech Sci, Moscow Institute of Nonferrous Metals and Gold, Moscow, 1953. (Referativnyy Zhurnal-Khimiya, No 11, Moscow, 1954)

SO: SUM 313, 23 Dec 1954

GULYANITSKAYA, Z.F.

Electrical and heat conductivities of some copper and nickel sulfide systems. D. M. Chizhikov, Z. F. Gulyanitskaya, and N. N. Bogovarova. *Izvest. Akad. Nauk S.S.S.R., Otdel. Tekh. Nauk* 1955, No. 6, 109–13.—A series of binary Cu-Ni sulfide and ternary Cu-Ni-Fe sulfide alloys were prepd. from the pure sulfides. The phase compn. of the alloys was investigated thermographically, by studying their microstructure and microhardness. Ternary alloys were composed of solid solns. of Fe-Ni-Cu, Cu_2S, a compd. $(FeS)_2Ni_3S_2$, the $Ni_3S_2(FeS)_2$ and Ni_3S_2 eutectic. The elec. cond. of FeS is 3.78 ohm^{-1} $cm.^{-1}$, of Cu_2S 3.7 × 10^3 $cm.^{-1}$ ohm^{-1}, and of Ni_3S_2 3.7 × 10^4 ohm^{-1} $cm.^{-1}$ The heat cond. of Cu-Ni sulfide alloys is reduced by increasing the Cu_2S and FeS concns.

W. M. Sternberg

USSR/Thermodynamics. Thermochemistry. Equilibria. Physico-Chemical Analysis. Phase Transitions. B-8

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 26143

Author : G.G. Urazov, Ye.I. Speranskaya, Z.F. Gulyanitskaya
Title : Physico-Chemical Study of Interaction of Lead Oxide with Antimony and Tin Oxides.

Orig Pub : Zh. neorgan. khimii, 1956, 1, No 6, 1413-1417

Abstract : The system Pb - SnO_2 was studied in detail by the methods of the thermal and the x-ray phase analyses. The obtained data point out the formation of a compound of the composition Pb_2SnO_4 (I) in the solid state. The temperature of formation of I is 780°, the incongruent melting point is 1060°. The eutectic of I and PbO was found at 2.5% of SnE_2 and 850°.

Card : 1/1

SOV/137-58-9-18455

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 39 (USSR)

AUTHORS: Gulyanitskaya, Z. F., Chizhikov, D. M., Bogovarova, N. N.

TITLE: Electrical Conductivity and Heat Conductivity of Alloys of the Sulfides of Lead, Copper, Zinc, and Iron (Elektroprovodnost' i teploprovodnost' splavov sul'fidov svintsa, medi, tsinka i zheleza)

PERIODICAL: Tr. In-ta metallurgii AN SSSR, 1957, Nr 2, pp 54-64

ABSTRACT: The electrical conductivity and heat conductivity of single synthetic (Cu_2S, PbS, and ZnS), binary, ternary, and quaternary alloys of these sulfides, including also FeS, and likewise of industrial mattes were investigated in relation to their composition at 20°C. The electrical conductivity γ of FeS, Cu_2S, and PbS constitutes respectively 3.78, 370.0, and 1050.0 mho/cm. For the Cu_2S-PbS alloys the lowest value for γ corresponds to the eutectic composition of the alloy (40% PbS and 60% Cu_2S) and equals 7 mho/cm. For the Cu_2S-FeS alloys γ increases with an increase in the Cu_2S content. The addition of ZnS to various alloys has a different effect on their γ. The addition of FeS to

Card 1/2

SOV/137-58-9-18455

Electrical Conductivity and Heat Conductivity (cont.)

Cu_2S-PbS alloys increases their γ. The value for γ for alloys of the four sulfides and of the industrial mattes are close to the values of obtained for binary and ternary sulfides. The variation in the heat conductivity in relation to the composition is analogous to the variation in γ.

G. F.

1. Metal sulfides--Conductivity 2. Copper-sulfides--Metallurgical effects
3. Iron-sulfides--Metallurgical effects 4. Lead-sulfides--Metallurgical effects
5. Zinc-sulfides--Metallurgical effects

Card 2/2

GULYANITSKAYA, Z.F.; CHIZHIKOV, D.M.; BOGOVAROVA, N.N.

Microhardness of certain sulfide alloys. Trudy Inst.met. no.3:165-170 '58. (MIRA 12:3)
(Nonferrous metals--Testing)

5(2) SOV/78-4-9-23/44

AUTHORS: Chizhikov, D. M., Gulyanitskaya, Z. F., Schastlivyy, T. P.

TITLE: The Effect of Oxides of Alkaline-earth Metals on the Specific Electroconductivity of Liquid Melt of the System FeO - SiO_2 - (CaO; MgO; BaO)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 9, pp 2067-2071 (USSR)

ABSTRACT: The investigation of the specific electroconductivity of the system FeO - SiO_2 with admixtures of different slag-forming oxides is of importance for the ionic theory of the slag. This theory is confirmed immediately by the electroconductivity and the possibility of an electrolysis of molten slags. Measurements were made by the voltmeter - ammeter method (direct current method). At the outset the system FeO - SiO_2 - (Fe_2O_3) was examined (Table 1). The SiO_2 content was changed to various quantities within the range of 0 and 48 % by weight. As figure 1 shows, the curves flatten out as the SiO_2 content is increased. Up to 28 % by weight of SiO_2 the results are in agreement with

Card 1/2

those obtained by O. A. Yesin and N. V. Zaimskikh (Ref 2). The deviation from the values obtained in reference 2 in the case of higher SiO_2 contents may be explained by the separation of tridymite not considered by the other research workers. Tridymite ascends, melts again, and forms a layer enriched with SiO_2. Figure 2 shows that additions of CaO, MgO, or BaO increase the conductivity of the system FeO - SiO_2 - (Fe_2O_3) at a constant ratio of $SiO_2/FeO = 0.9$. The same phenomenon is to be observed when SiO_2 is substituted for by the oxide of an alkaline-earth metal. When FeO is replaced by CaO or MgO a slight increase, and then a drop of the specific conductivity will occur. Increasing additions of BaO result in a continuous decrease in the specific conductivity. There are 2 figures, 1 table, and 16 references, 7 of which are Soviet.

SUBMITTED: April 7, 1958

Card 2/2

18.8100
5.2200(C)

67796
SOV/180-59-5-6/37

AUTHORS: Gulyanitskaya, Z.F., Schastlivyy, V.P., and Chizhikov, D.M. (Moscow)

TITLE: Influence of Oxides of Alkaline-Earth Metals on the Magnetic Susceptibility of Ferruginous Silicates

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1959, Nr 5, pp 45-48 (USSR)

ABSTRACT: The authors draw attention to the absence of published data on the magnetic properties of silicate melts, although such data would have a useful bearing on the structure of oxide melts and might find practical application. They describe their work on the system SiO_2-FeO-(Fe_2O_3) and SiO_2-FeO-CaO (MgO, BaO) at 700-1300 °C. A Guouy type installation (Fig 1) was used, with a constant field of 4000 oersted, the change in weight of the 6-8 g specimens in the field being determined with an analytical balance to 0.0001 g. The specimen was in a cylindrical corundum crucible in a graphite resistance furnace between the poles of the electromagnet. Temperature was measured with a platinum/platinum-rhodium thermocouple 5 mm from the crucible bottom. A preliminary study was made of the

Card 1/3

Influence of Oxides of Alkaline-Earth Metals on the Magnetic Susceptibility of Ferruginous Silicates

susceptibility of SiO_2-FeO-(Fe_2O_3) relative to temperature (Fig 2) and SiO_2-content (Fig 3). Next the influence of CaO, MgO and BaO (up to 30%) was studied; the results being shown by curves 1, 2, and 3, respectively, in Fig 4 as plots of susceptibility against weight % of added oxide at 800 °C (interrupted lines) and 1200 °C (continuous lines). It was found that the susceptibility of SiO_2-FeO-(Fe_2O_3) and SiO_2-FeO-CaO(MgO, BaO) melts with 5-48% SiO_2, 27-52% FeO and 0-30% CaO, MgO or BaO depends mainly on the iron-oxide content. All the compositions studied were para-magnetic, the value depending on temperature and amount of added oxides. This is confirmed by the fact that magnetic susceptibility falls when FeO or SiO_2 is replaced by CaO, MgO or BaO in melts with a constant FeO or SiO_2 content. Thus, at 1300 °C the susceptibility of melts with a constant SiO_2-content is reduced to 1/2-2/3; the change at the same temperature with constant FeO-content melts is less. The greatest reduction in susceptibility is produced by additions of MgO. In melts with a constant

Card 2/3

67796

SOV/180-59-5-6/37

Influence of Oxides of Alkaline-Earth Metals on the Magnetic Susceptibility of Ferruginous Silicates

SiO_2 : FeO ratio the value of susceptibility varies between 25 x 10^{-6} to 12.5 x 10^{-6}. Breaks and maxima in the susceptibility curves for the complex melts probably correspond to structural changes. For all the melts susceptibility decreased with rising temperature, but melting had no effect.
There are 4 figures, 2 tables and 1 Soviet reference.

Card 3/3

SUBMITTED: September 16, 1958

66439

~~5(1,2)~~ 18.8100, 5.2200 (C) SOV/20-129-1-48/64

AUTHORS: Chizhikov, D.M., Corresponding Member AS USSR, Gulyanitskaya, Z.F., Schastlivyy, V.P., Petrova, R.N.

TITLE: Properties of the Melts of the System CaO-FeO-SiO_2 Upon Substitution of FeO by Zinc Oxide

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 1, pp 174-176 (USSR)

ABSTRACT: The slag formed in melting lead, copper, and zinc contains zinc oxide. Its effect on the properties of the silicate melts mentioned in the title had not been investigated systematically. Investigation results of the effect of zinc oxide on electric conductivity, magnetic susceptibility, and heat content of the above melts are investigated in the paper under review. First of all, melts of SiO_2-FeO (Fe_2O_3) were used. It was proved that an addition of ZnO at a constant ratio SiO_2/FeO = 0.9 or the substitution of silica by ZnO increase the electric conductivity of the melts. If FeO is replaced by ZnO, conductivity decreases. The magnetic sus-

Card 1/3

Properties of the Melts of the System CaO-FeO-SiO_2 SOV/20-129-1-48/64
Upon Substitution of FeO by Zinc Oxide

ceptibility of the SiO_2-FeO melts depends on temperature and the content of iron oxides. The specific heat of these melts decreases with ZnO addition. The effect of the zinc oxide additions on the properties of the melt mentioned in the title was investigated at a constant ratio SiO_2/CaO (in weight per cent) upon substitution of iron oxydul by zinc oxide in 3 groups. In these groups the ratio mentioned was 0.8, 1.0 and 1.6, respectively. The sum of FeO and ZnO remained constant in all investigations. Thermographical analysis showed that most combinations melt between 1130 and 1230°. Melts with SiO_2/CaO = 1.0 and a ZnO content of more than 7.0% have the highest melting temperature. They are sintered at 1300° but not melted completely. Table 1 shows the measurements of the 3 properties mentioned made on twice melted slags and on the melts CaO-FeO-SiO_2-ZnO where FeO was substituted by ZnO. The data are for 1200, 1300, and 1400°. Hence it appears that the specific conductivity is reduced upon substitution of ferrous oxyde by zinc oxide.

Card 2/3

Properties of the Melts of the System $CaO-FeO-SiO_2$ Upon Substitution of FeO by Zinc Oxide

SOV/20-129-1-48/64

In all melts it decreases as temperature increases. Magnetic susceptibility depends on the content of iron oxides and varies hardly at all with temperature. The investigated melts are paramagnetic. The Curie point lies at 700°. Figure 1 shows that at a ratio of $SiO_2/CaO = 1$ and at 1300° the melts $CaO-FeO-SiO_2-ZnO$ have the highest average values of electric conductivity and magnetic susceptibility but the lowest values of specific heat. Figure 2 shows the isothermal lines of these three properties measured for the conditions last mentioned. At a content of 10% ZnO the curves show breaks which seem to correspond to the formation of a new phase. There are 2 figures and 1 table.

ASSOCIATION: Institut metallurgii im. A.A. Baykova Akademii nauk SSSR (Institute of Metallurgy imeni A.A. Baykov of the Academy of Sciences, USSR)

SUBMITTED: July 6, 1959

Card 3/3

GULYANITSKAYA, Z.F. (Moskva); PETROVA, R.N. (Moskva); CHIZHIKOV, D.M.(Moskva)

Heat content of melts in the system ferrous oxide - zinc oxide - silica. Izv. AN. SSSR. Otd. tekh. nauk. Met. i topl. no.2:55-59 Mr-Ap '61. (MIRA 14:4)

(Slag--Thermal properties)

GULYANITSKAYA, Z.F. (Moskva); PETROVA, R.N. (Moskva); CHIZHIKOV, D.M. (Moskva)

Heat content of alloys in the system calcium oxide - ferrous oxide - zinc oxide - silica. Izv.AN SSSR.Otd.tekh.nauk.Met.i topl. no.5:31-35 S-O '61. (MIRA 14:10)
(Silicon-iron alloys--Thermal properties)

CHIZHIKOV, D.M. (Moskva); GULYANITSKAYA, Z.F. (Moskva); PETROVA, R.N. (Moskva)

Heat content, temperature and heat conductivity of alloys of the system calcium oxide - iron oxide - zinc oxide - alumina - silica. Izv. AN SSSR. Otd. tekh. nauk. Met. i topl. no.6:37-41 N-D '61. (MIRA 14:12)

(Iron-silicon-zinc alloys—Thermal properties)

CHIZHIKOV, David Mikhaylovich; GULYANITSKAYA, Zoya Feodos'yevna; GUROVICH, Natal'ya Aleksandrovna; KITLER, Igor' Nikolayevich; KREYNGAUZ, Bella Pavlovna; NOVOSELOVA, Valentina Nikolayevna; PLIGINSKAYA, Lyubov' Vladimirovna; USTINOVSKIY, Boris Zinov'yevich; KLIMOV, V.A., red. izd-va; LAUT, V.G., tekhn. red.

[Hydro- and electrometallurgy of sulfide alloys and mattes] Gidroelektrometallurgiia sul'fidnykh splavov i shteinov. Moskva, Izd-vo Akad. nauk SSSR, 1962. 204 p. (MIRA 15:9)

1. Chlen-korrespondent Akademii nauk SSSR (for Chizhikov).
(Sulfides—Metallurgy) (Hydrometallurgy)
(Electrometallurgy)

ACCESSION NR: AT4023780 S/2723/63/000/002/0128/0133

AUTHOR: Gulyanitskiy, A. A.; Mikitishin, S. I.; Ty*nny*y, A. N.; Vasilenko, I. I.

TITLE: The effect of sulfur and dichloramine B additions to oil on the interaction between the friction surfaces

SOURCE: AN UkrRSR. Insty*tut mashy*noznavstva i avtomaty*ky*, L'viv. Vliyaniye rabochikh sred na svoystva materialov (Effect of active media on the properties of materials), no. 2, 1963, 128-133

TOPIC TAGS: oil additive, lubrication, adhesion, seizing sulfur additive, dichloramine, oil, sulfuric acid, dichloramine B, scoring

ABSTRACT: In publications by A. K. Zaytsev and by S. Ya. Veyler and V. I. Likhtman, it was shown that the introduction of sulfur into oil prevents adhesion and seizing. The aim of the present investigation was to determine the influence of oil additives on score prevention and working in of metal rods used for hydraulic pumps, as well as to study the effect of working in on ultimate work capacity. Bronze, different types of cast iron, and lead-coated steel were tested on AIMI-160 friction machines, operating in industrial oil 20. The favorable influence of additives such as sulfur and dichloramine B was explained by the action of iron sulfides and chlorides on the contacting surfaces, resulting

Card 1/2

ACCESSION NR: AT4023780

in low shear-strain resistance. Dichloramine Б was particularly effective since it saturates the surface layer and ensures high anti-seizing action even when the oil continues to work without additives. Dichloramine B is considered preferable to other existing additives. Orig. art. has: 2 figures and 2 tables.

ASSOCIATION: Insty*tut mashy*noznavstva i avtomaty*ky* AN UkrRSR, Lvov (Institute of Machine Technology and Automation, AN UkrRSR)

SUBMITTED: 00 DATE ACQ: 10Apr64 ENCL: 00

SUB CODE: OC, FP NO REF SOV: 004 OTHER: 000

Card 2/2

[illegible]

Machine for testing materials for wear and antiseizing properties. Nauch.zap.IMA AN URSR.Ser.mashinoved. 10:143-147 '64.

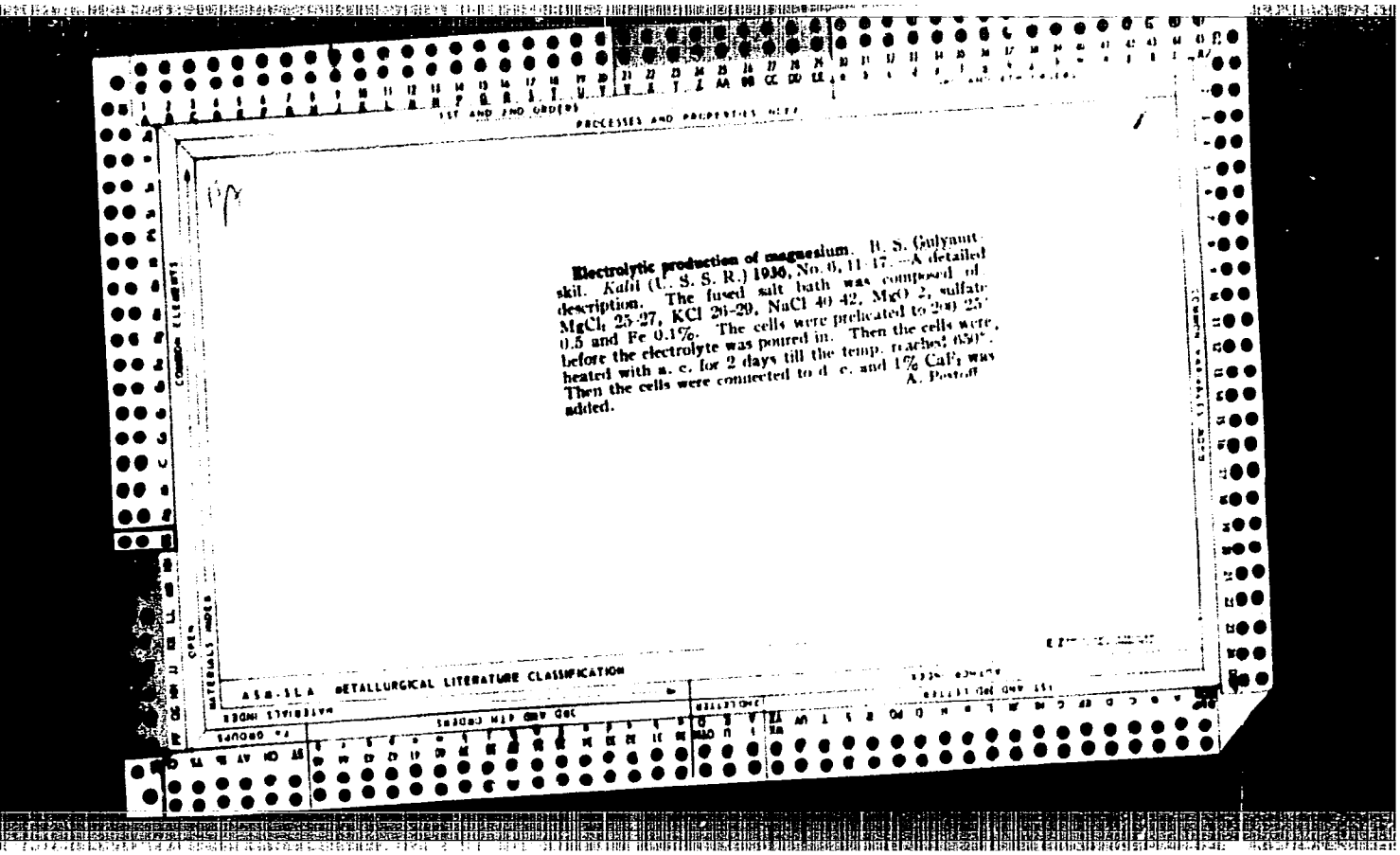
(MIRA 17:10)

GULYANITSKIY, A.A.; [illegible], A.N.; BARAN, M.I.; [illegible], S.I.; VASILENKO, I.I.

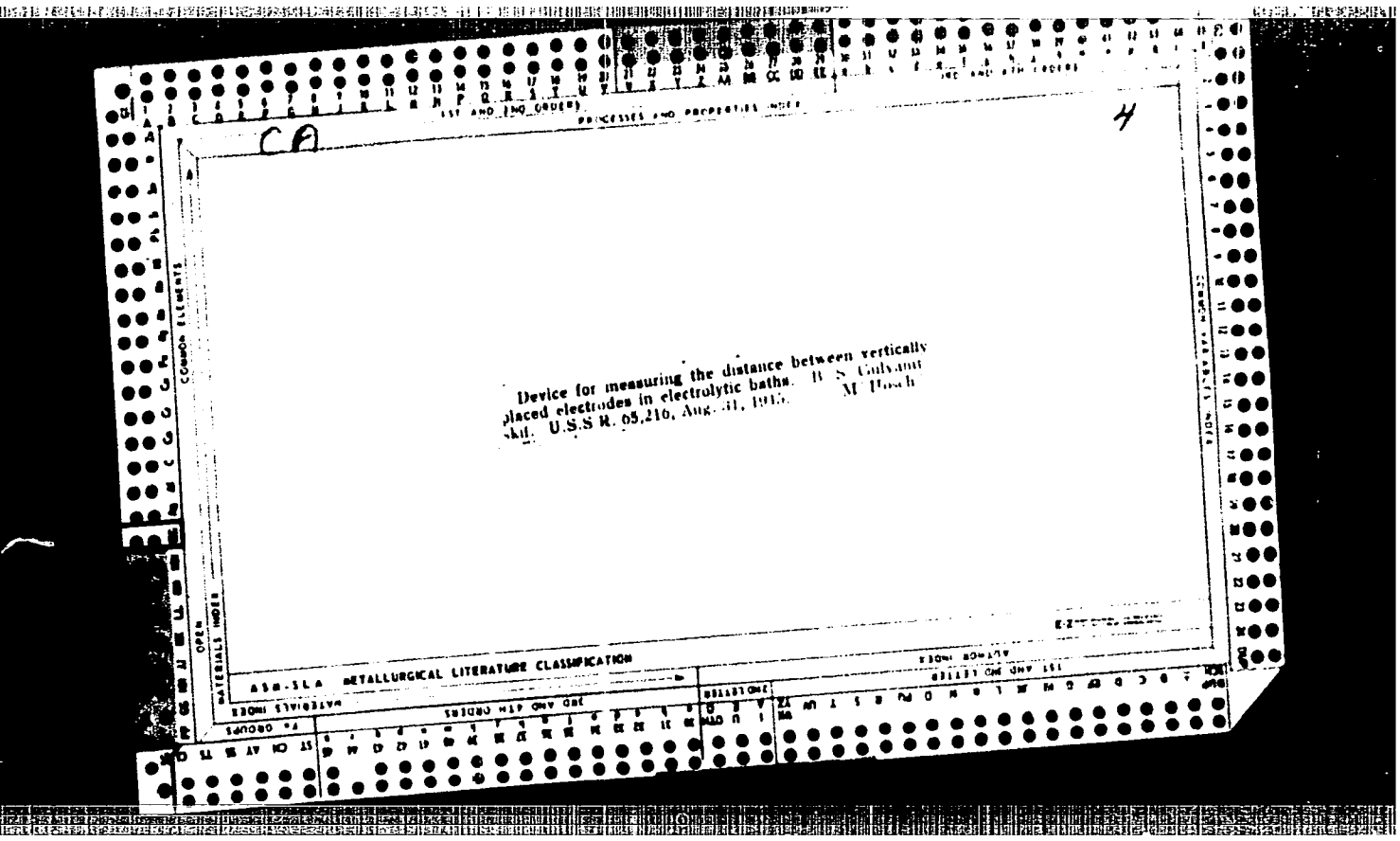
Antiseizing and antifriction properties of metals in engine-pump parts. Nauch.zap.IMA AN URSR.Ser.mashinoved. 10:148-151 '64. (MIRA 17:10)

Effect of heat treatment of the blades of hydraulic pumps on their wear. Ibid.:158-164

Apparatus for electrodeposition of magnesium. B. S. Gulyanitskiĭ, S. G. Kotousov and V. M. Farengol'ts. Russ., 46,047, Feb. 29, 1936. In an electrolyzer with continuous circulation of the molten electrolyte and with anode blocks in the form of solid walls which are used as partitions between the units, the overflow of the electrolyte is effected from one unit to the other by the use of channels arranged in the side walls.



Electrolytic production of magnesium. B. S. Gulyanitskii. *Kalii* (U. S. S. R.) **1930**, No. 6, 11-17.—A detailed description. The fused salt bath was composed of MgCl$_2$ 25-27, KCl 26-29, NaCl 40-42, MgO 2, sulfate 0.5 and Fe 0.1%. The cells were preheated to 200-250° before the electrolyte was poured in. Then the cells were heated with a. c. for 2 days till the temp. reached 650°. Then the cells were connected to d. c. and 1% CaF$_2$ was added. A. Postroff



GULYANITSKIY, B. S.

Jul/Aug 1947

JAPAN/Metals
Magnesium
Metallurgical Plants

"Japanese Magnesium Industry," B. S. Gulyanitskiy, 6 pp

"Tsvetnyye Metally" No 4

Well-illustrated article on various aspects of the production of magnesium in Japan for the years 1944 - 1945. Traces the rise of the industry from the year 1934. Discusses output and location of plants, and various production methods employed.

24T73

GULYANITSKIY, B. S.

Metallurgy of Magnesium, Gosudarstvennoye Nauchno-Tekhnicheskoye Izdatel'stvo Literatury po Chernoy i Tsvetnoy Metallurgii. Moscow (1950) 491 pp.

B-78883, 13 Sep 54

GULYANITSKIY, B.S.

BELYAYEV, A.I.; ZHEMCHUZHINA, Ye.A.; PADALKA, Ye.N., kandidat tekhnicheskikh nauk; retsenzent; GULYANITSKIY, B.S., inzhener, retsenzent; DOKUKINA, Ye.V., redaktor; CHETVERIKOVA, L., tekhnicheskiy redaktor.

[Surface phenomena in metallurgical processes] Poverkhnostnye iavleniia v metallurgicheskikh protsessakh. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1952. 143 p. [Microfilm] (MLRA 7:10)

(Metallurgy) (Surfaces (Technology)) (Surface chemistry)

GULYANITSKIY, B. S.

Berlin, Verlag Technik, 1953.
451 p. illus., diagrs., tables.
Translation from the Russian, "Metallurgiya magniya", Moscow 1950.
Added t.-p. in Russian.
"Literaturverzeichnis": p. 449-451.

N/5
615.5
.S91

GULYANITSKIY, B. S.

3402* Mechanism of Reduction of Magnesium Oxide by Carbon. O mekhanizme vosstanovleniia okisi magniia uglerodom. (Russian.) B. S. Gulianitskii and D. M. Chizhikov. *Izvestiia akademii nauk SSSR, otdelenie tekhnicheskikh nauk*, 1955, no. 11, Nov., p. 13-24.

Relation of reduction rate to pressure of CO; volatility of MgO in vacuum and in A atmosphere; effect of temperature on reaction speed in CO and in vacuum. Graphs. 30 ref.

GULYANITSKIY, B.S.; LIPKES, Ya.M.; GEGER, V.E.

Utilization of titanium waste products. (Review of foreign literature). TSvet.met. 29 no.4:88-94 Ap '56. (MLRA 9:8)
(Titanium--Metallurgy)

AUTHORS: Krivoruchenko, V.V. and Gulyanitskiy, B. S. 136-3-9/25

TITLE: The Energy Balance of an Aluminium Bath. (Ob energeticheskom balanse alyuminiyevoy vanny).

PERIODICAL: Tsvetnyye Metally, 1957, No.3, pp.47-51 (USSR)

ABSTRACT: This article was written in connection with one by K. M. Kaganskiy and A. A. Yedigaryan (Ref.1) and discusses the part of electrical effects in the compilation of energy balances for the electrolytic production of aluminium. The present authors maintain that the heat and electrical balances are closely inter-related and that the refusal of Kaganskiy and Yedigoryan to use the reversible e.m.f. is unwise. They discuss depolarization and consider the thermodynamics of the overall process. Equations for the various items of the energy balance are tabulated. The conclusion reached is that interpolar distance in relation to the energy balance indicates whether electrolyser design is correct. For energy balances of working electrolyzers the criterion of correctness of the balance is the agreement between measured and calculated voltage.
There are 1 table and one Slavic reference.

1/1

AVAILABLE: Library of Congress

GULYANITSKIY, B. S.

10019* (Russian.) Energy Balance of the Aluminum Bath. Ob energeticheskom balanse alumuinievoi vanny. V. V. Krivoruchenko and B. S. Gulianitskii. *Tsvetnye Metally*, v. 30, Mar. 1937, p. 47-51.

After the calculated balance of the aluminum electrolyzer has been determined, the interpolar distance should be ascertained. If this distance is to large, the insulation will have to be improved to prevent excessive heat loss.

GULYANITSKIY, B.S.

LEONIDOV, N.K.

25(5) PHASE I BOOK EXPLOITATION SOV/1697

Akademiya nauk SSSR. Institut mashinovedeniya i tekhnicheskoy informatsii

Metallurgiya SSSR, 1917-1957, t. 1 (Metallurgy of the USSR, 1917 - 1957, Vol. 1) Moscow, Metallurgizdat, 1958. 745 p. 3,000 copies printed.

Ed. (Title page): I. P. Bardin, Academician; Ed. (Inside book): G. V. Popova; Tech. Ed.: O. G. Bakar.

PURPOSE: The book is intended for scientific workers and engineers in metallurgical plants and in the machine-building industry. It may also be used by students in advanced courses in metallurgical vuzes.

COVERAGE: This collection of articles covers extensively practical and theoretical developments in Soviet metallurgy during the last 40 years. The material dealt with the discovery and development of the major ore deposits and the growth of the metal industry in various parts of European and Asiatic USSR. Research institutes, laboratories, their location, and the names of the scientists and engineers involved are listed. Many papers contain so many references and mass of various personalities that it was considered beyond the scope of the coverage of each article to list them. The authors claim that the processes, methods and theories described in this book reflect the most recent developments in Soviet metallurgy.

Card 1/43

Metallurgy of the USSR (Cont.) SOV/1697

Production figures are given. It is planned to use concentrates of silliminite for the production of aluminum and silumin. Various method of aluminum production are discussed. There are 76Soviet references. 552

Gulyanitskiy, B.S. The Metallurgy of Magnesium
Russian geological exploration for magnesium minerals is said to have started only under the Soviet regime. The Verkhne-Kamsk deposits of carnallite are reported to amount to billions of tons. A number of saline lake are listed as another valuable source of raw material. The bays of the Sea of Azov and of the Crimea Sea are reported to contain enough salts for commercial exploitation. Deposits of dolomite are found in most industrial areas of the USSR. Currently three methods of producing magnesium are used in the USSR: 1) electrolysis 2) reduction of magnesium oxide by ferrosilicon, and 3) reduction of magnesium oxide by carbon. Other methods are under development which will take advantage of local conditions and streamline the production of magnesium. There are 89 Soviet references. 570

Bakin, S.P. Development of the Metallurgy of Rare and Minor Metals in USSR
Rare metals are classified as follows: 1. Light rare metals Li, Rb, Cs, Be, 2. Rare earths - all Lanthanides of Sc, Y, 3. Scattered rare metals Ge, In, Tl; Ga, h. High temperature rare metals Ti, Zr, Hf, V, Nb, Ta, Mo, W, 5. Radioactive metals Ra and all actinoid elements. Mercury, tin,

Card 15/21

SOV/136-59-5-21/21

AUTHOR: Gulyanitskiy, B.S.

TITLE: Utilization of Titanium Waste (Ob ispol'zovanii otkhodov titana)

PERIODICAL: Tsvetnyye metally, 1959, Nr 5, pp 91-95 (USSR)

ABSTRACT: This survey of foreign literature on titanium-waste utilization covers the period since the author's (with Ya.M. Lipkes and V.E. Geger) previous survey (Ref 1) published in 1956.
There are 1 table and 77 references, 4 of which are Soviet, 70 English and 1 Belgian.

Card 1/1

USCOMM-DC 61,306